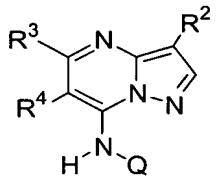
Amendments to the Claims

The listing of claims will replace all prior versions and listing of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A compound represented by the structural formula:



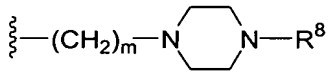
Formula III

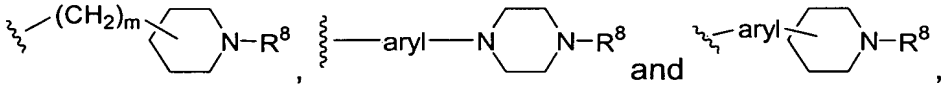
or a pharmaceutically acceptable salt thereof,

wherein:

Q is selected from the group consisting of $-S(O_2)NR^6R^7-$, $-C(O)NR^6R^7-$ and $-C(O)OR^7-$;

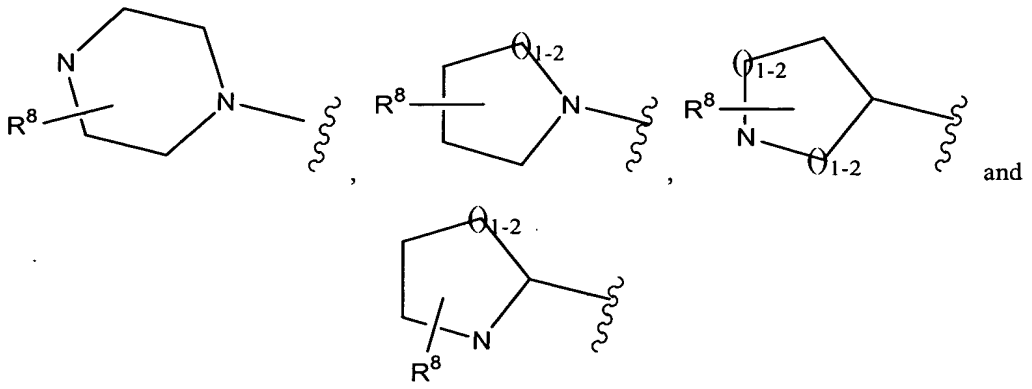
R^2 is selected from the group consisting of R^9, alkyl, alkynyl, alkynylalkyl, cycloalkyl, $-CF_3$, $-C(O_2)R^6$, aryl, arylalkyl, heteroarylalkyl, heterocyclyl, alkyl substituted with 1-6 R^9 groups which can be the same or different and are independently selected from the list of R^9 shown later below,





wherein the aryl in the above-noted definitions for R^2 can be unsubstituted or optionally substituted with one or more moieties which can be the same or different, each moiety being independently selected from the group consisting of halogen, CN, $-OR^5$, SR^5, $-S(O_2)R^6$, $-S(O_2)NR^5R^6$, $-NR^5R^6$, $-C(O)NR^5R^6$, CF_3, alkyl, aryl and OCF_3;

R^3 is selected from the group consisting of H, halogen, alkyl, alkynyl, $-C(O)NR^5R^6$, $-C(O)OR^4$, $-NR^5R^6$, cycloalkyl, cycloalkylalkyl, aryl, arylalkyl, heterocyclyl, heterocyclylalkyl, heteroaryl, heteroarylalkyl,



and

wherein each of said alkyl, cycloalkyl, aryl, arylalkyl, heterocyclyl, heterocyclylalkyl, heteroaryl and heteroarylalkyl for R^3 and the heterocyclyl moieties whose structures are shown immediately above for R^3 can be substituted or optionally independently substituted with one or more moieties which can be the same or different, each moiety being independently selected from the group consisting of halogen, alkyl, aryl, cycloalkyl, CF_3, CN, $-OCF_3$, $-(CR^4R^5)_nOR^5$, $-OR^5$, $-NR^5R^6$, $-(CR^4R^5)_nNR^5R^6$, $-C(O_2)R^5$, $-C(O)R^5$, $-C(O)NR^5R^6$, $-SR^6$, $-S(O_2)R^6$, $-S(O_2)NR^5R^6$, $-N(R^5)S(O_2)R^7$, $-N(R^5)C(O)R^7$ and $-N(R^5)C(O)NR^5R^6$;

R^4 is H, halo or alkyl;

R^5 is H or alkyl;

R^6 is selected from the group consisting of H, alkyl, aryl, arylalkyl, cycloalkyl, heterocyclyl, heterocyclylalkyl, heteroaryl, and heteroarylalkyl, wherein each of said alkyl, aryl, arylalkyl, cycloalkyl, heterocyclyl, heterocyclylalkyl, heteroaryl, and heteroarylalkyl can be unsubstituted or optionally substituted with one or more moieties which can be the same or different, each moiety being independently selected from the group consisting of halogen, alkyl, aryl, cycloalkyl, heterocyclylalkyl, CF_3, OCF_3, CN, $-OR^5$, $-NR^5R^{10}$, $-N(R^5)Boc$, $-(CR^4R^5)_nOR^5$, $-C(O_2)R^5$, $-C(O)R^5$, $-C(O)NR^5R^{10}$, $-SO_3H$, $-SR^{10}$, $-S(O_2)R^7$, $-S(O_2)NR^5R^{10}$, $-N(R^5)S(O_2)R^7$, $-N(R^5)C(O)R^7$ and $-N(R^5)C(O)NR^5R^{10}$;

R^{10} is selected from the group consisting of H, alkyl, aryl, arylalkyl, cycloalkyl, heterocyclyl, heterocyclylalkyl, heteroaryl, and heteroarylalkyl, wherein each of said alkyl, aryl, arylalkyl, cycloalkyl, heterocyclyl, heterocyclylalkyl, heteroaryl, and heteroarylalkyl can be unsubstituted or optionally substituted with one or more moieties which can be the same or

different, each moiety being independently selected from the group consisting of halogen, alkyl, aryl, cycloalkyl, heterocyclylalkyl, CF_3, OCF_3, CN, $-OR^5$, $-NR^4R^5$, $-N(R^5)Boc$, $-(CR^4R^5)_nOR^5$, $-C(O_2)R^5$, $-C(O)NR^4R^5$, $-C(O)R^5$, $-SO_3H$, $-SR^5$, $-S(O_2)R^7$, $-S(O_2)NR^4R^5$, $-N(R^5)S(O_2)R^7$, $-N(R^5)C(O)R^7$ and $-N(R^5)C(O)NR^4R^5$;

or optionally (i) R^5 and R^{10} in the moiety $-NR^5R^{10}$, or (ii) R^5 and R^6 in the moiety $-NR^5R^6$, may be joined together to form a cycloalkyl or heterocyclyl moiety, with each of said cycloalkyl or heterocyclyl moiety being unsubstituted or optionally independently being substituted with one or more R^9 groups;

R^7 is selected from the group consisting of alkyl, cycloalkyl, aryl, heteroaryl, arylalkyl and heteroarylalkyl, wherein each of said alkyl, cycloalkyl, heteroarylalkyl, aryl, heteroaryl and arylalkyl can be unsubstituted or optionally independently substituted with one or more moieties which can be the same or different, each moiety being independently selected from the group consisting of halogen, alkyl, aryl, cycloalkyl, CF_3, OCF_3, CN, $-OR^5$, $-NR^5R^{10}$, $-CH_2OR^5$, $-C(O_2)R^5$, $-C(O)NR^5R^{10}$, $-C(O)R^5$, $-SR^{10}$, $-S(O_2)R^{10}$, $-S(O_2)NR^5R^{10}$, $-N(R^5)S(O_2)R^{10}$, $-N(R^5)C(O)R^{10}$ and $-N(R^5)C(O)NR^5R^{10}$;

R^8 is selected from the group consisting of R^6, $-C(O)NR^5R^{10}$, $-S(O_2)NR^5R^{10}$, $-C(O)R^7$and $-S(O_2)R^7$;

R^9 is selected from the group consisting of halogen, CN, $-NR^5R^{10}$, $-C(O_2)R^6$, $-C(O)NR^5R^{10}$, $-OR^6$, $-SR^6$, $-S(O_2)R^7$, $-S(O_2)NR^5R^{10}$, $-N(R^5)S(O_2)R^7$, $-N(R^5)C(O)R^7$and $-N(R^5)C(O)NR^5R^{10}$;

m is 0 to 4, and

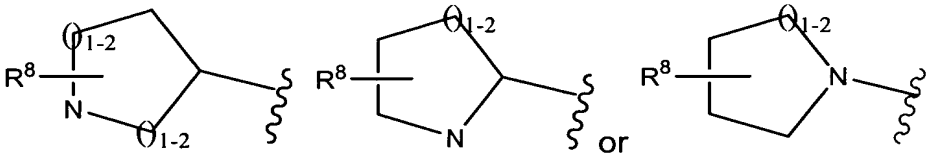
n is 1 to 4.

Claim 2 (original): The compound of claim 1, wherein R^6 is H and R^7 is unsubstituted aryl, unsubstituted heteroaryl, aryl substituted with 1-3 moieties (which moieties can be the same or different with each moiety being independently selected from the group consisting of phenyl, pyridyl, thiophenyl, halogen, cyano, $-OR^5$, $-S(O_2)R^6$, CF_3, alkyl and $-OCF_3$), and heteroaryl substituted with 1-3 moieties aryl fused with an aryl or heteroaryl group (which aryl or heteroaryl may be unsubstituted or optionally substituted with 1-3 moieties which moieties can be the same or different with each

moiety being independently selected from the group consisting of phenyl, pyridyl, thiophenyl, furanyl and thiazolyl, halogen, cyano, $-OR^5$, $-SR^5$, $-S(O_2)R^6$, $-S(O_2)NR^5R^6$, $-NR^5R^6$, $-C(O)NR^5R^6$, CF_3, alkyl and $-OCF_3$);

R^2 is halogen, CF_3, CN, lower alkyl, $-CH_2-OR^6$, $-OR^6$, cycloalkyl, aryl or heteroaryl; and

R^3 is H, halogen, lower alkyl, aryl, heteroaryl, $-C(O)OR^4$, cycloalkyl, $-NR^5R^6$, heterocyclylalkyl,



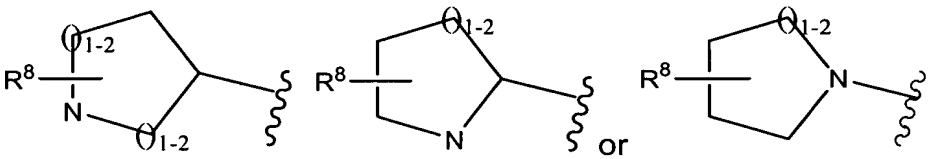
or

wherein each of said alkyl, aryl, heteroaryl, heterocyclyl and cycloalkyl for R^3 are unsubstituted or optionally independently substituted with one or more moieties which can be the same or different, each moiety being independently selected from the group consisting of halogen, CF_3, OCF_3, lower alkyl, CN and OR^5.

Claim 3 (original): The compound of claim 1, wherein R^{10} is H and R^7 is unsubstituted aryl, unsubstituted heteroaryl, aryl substituted with 1-3 moieties (which moieties can be the same or different with each moiety being independently selected from the group consisting of phenyl, pyridyl, thiophenyl, halogen, cyano, $-OR^5$, $-S(O_2)R^6$, CF_3, alkyl and $-OCF_3$), and heteroaryl substituted with 1-3 moieties aryl fused with an aryl or heteroaryl group (which aryl or heteroaryl may be unsubstituted or optionally substituted with 1-3 moieties which moieties can be the same or different with each moiety being independently selected from the group consisting of phenyl, pyridyl, thiophenyl, furanyl and thiazolyl, halogen, cyano, $-OR^5$, $-SR^5$, $-S(O_2)R^6$, $-S(O_2)NR^5R^6$, $-NR^5R^6$, $-C(O)NR^5R^6$, CF_3, alkyl and $-OCF_3$);

R^2 is halogen, CF_3, CN, lower alkyl, $-CH_2-OR^6$, $-OR^6$, cycloalkyl, aryl or heteroaryl; and

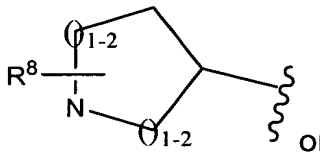
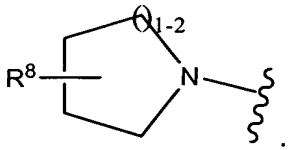
R^3 is H, halogen, lower alkyl, aryl, heteroaryl, $-C(O)OR^4$, cycloalkyl, $-NR^5R^6$, heterocyclylalkyl, cycloalkylalkyl,



or

wherein each of said alkyl, aryl, heteroaryl, heterocyclyl and cycloalkyl for R^3 are unsubstituted or optionally independently substituted with one or more moieties which can be the same or different, each moiety being independently selected from the group consisting of halogen, CF_3, OCF_3, lower alkyl, CN and OR^5.

Claim 4 (original): The compound of claim 2, wherein R^2 is halogen, $-CH_2OR^6$, CN, CF_3, lower alkyl, cyclopropyl, $C(O)OR^6$, $-OR^6$, or aryl.

Claim 5 (original): The compound of claim 2, wherein R^3 is H, lower alkyl, cycloalkyl, $-C(O)OR^4$, aryl, heteroaryl, cycloalkylalkyl,  or  .

wherein each of said alkyl, aryl, cycloalkyl, heteroaryl, and the heterocyclyl moieties shown above for R^3 are optionally independently substituted with one or more moieties which can be the same or different, each moiety being independently selected from the group consisting of halogen, CF_3, lower alkyl, OMe, aryl, cyclopropyl, and CN.

Claim 6 (original): The compound of claim 2, wherein R^4 is H.

Claim 7 (original): The compound of claim 2, wherein R^5 is H.

Claim 8 (original): The compound of claim 2, wherein R^6 is H and R^7 is unsubstituted aryl.

Claim 9 (original): The compound of claim 2, wherein R^6 is H and R^7 is unsubstituted heteroaryl.

Claim 10 (original): The compound of claim 9, wherein R^7 is 4-pyridyl.

Claim 11 (original): The compound of claim 2, wherein R^7 is 4-pyridyl-N-oxide.

Claim 12 (original): The compound of claim 2, wherein R^7 is 4-pyridyl and Q is $-SO_2-NHR^7$.

Claim 13 (original): The compound of claim 2, wherein R^7 is 4-pyridyl-N-oxide and Q is $-C(O)-NHR^7-$.

Claim 14 (original): The compound of claim 3, wherein said R^2 is Br.

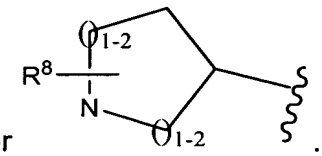
Claim 15 (original): The compound of claim 3, wherein said R^2 is Cl.

Claim 16 (original): The compound of claim 3, wherein R^2 is isopropyl or ethyl.

Claim 17 (original): The compound of claim 3, wherein R^2 is $-CH_2OH$ or $-CH_2OCH_3$.

Claim 18 (original): The compound of claim 3, wherein R^2 is cyclopropyl.

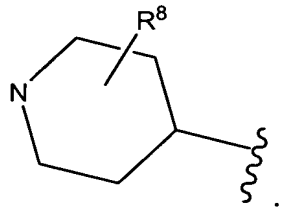
Claim 19 (original): The compound of claim 3, wherein R^2 is CN.

Claim 20 (original): The compound of claim 5, wherein R^3 is lower alkyl, cycloalkyl, cycloalkylalkyl, aryl or 

.

Claim 21 (original): The compound of claim 20, wherein R^3 is isopropyl.

Claim 22 (original): The compound of claim 20, wherein R^3 is:



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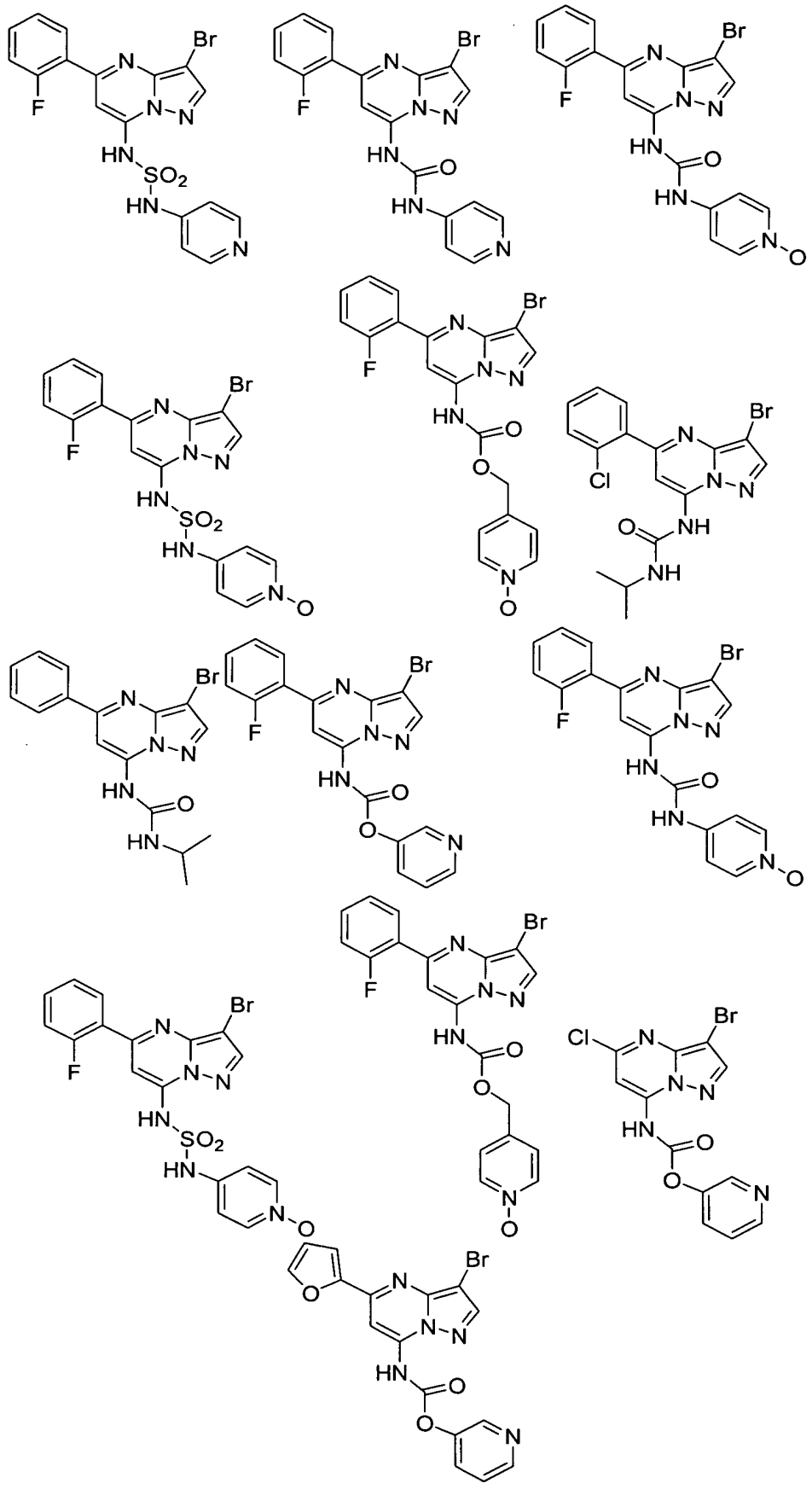
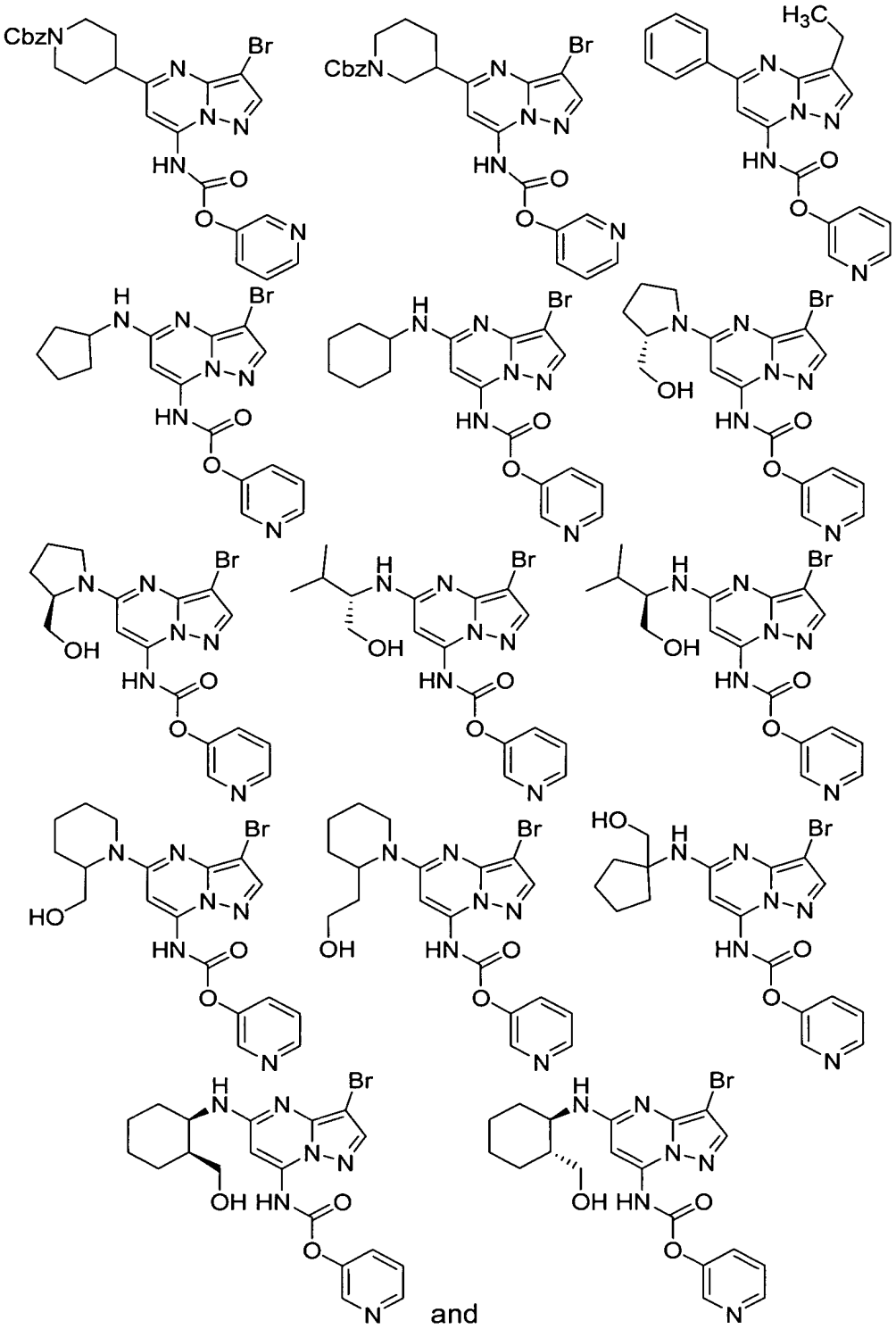
Claim 23 (original): The compound of claim 20, wherein R^3 is unsubstituted phenyl.

Claim 24 (original): The compound of claim 5, wherein R^8 is $-(CH_2)_nOH$ or $-(CH_2)_nOCH_3$, where n is 1 or 2.

Claim 25 (original): The compound of claim 20, wherein R^3 is a phenyl substituted with one or moieties selected from the group consisting of F, Br, Cl, lower alkyl, alkoxy and CF_3.

Claim 26 (currently amended): A compound selected from the group consisting of:

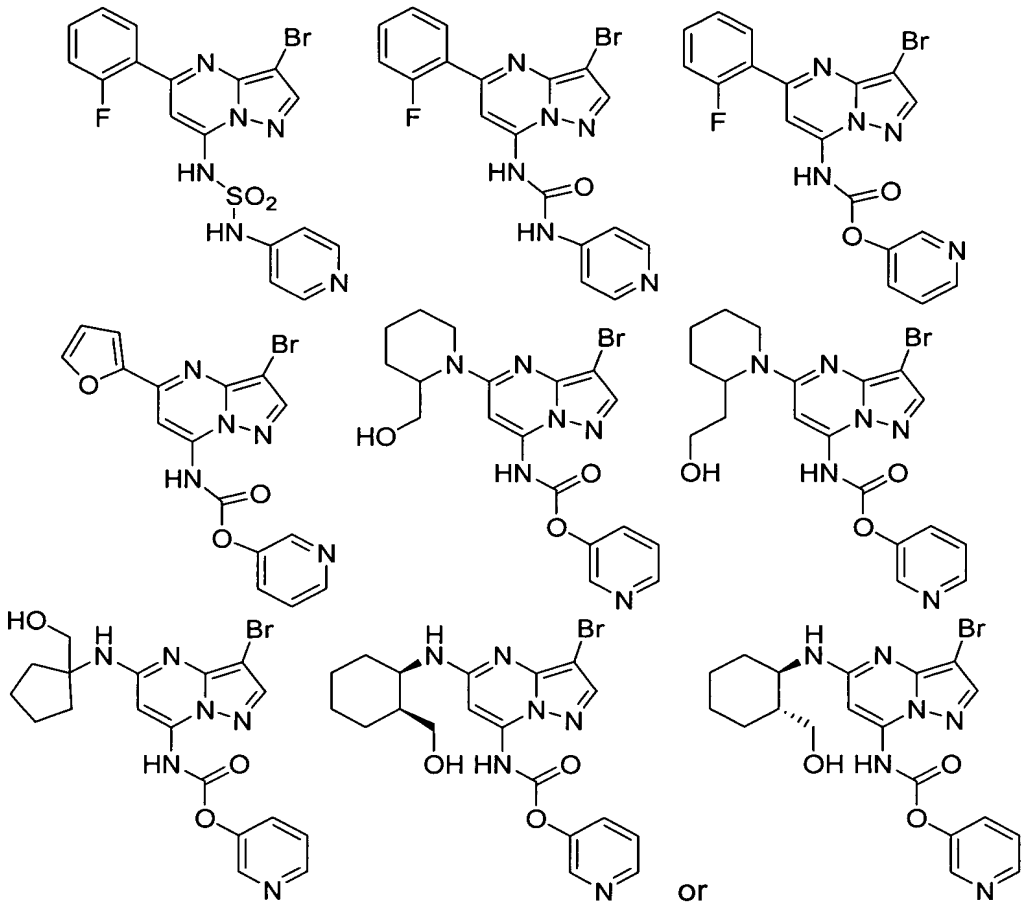




and

or a pharmaceutically acceptable salt ~~or solvate~~ thereof.

Claim 27 (currently amended): A compound of the formula:



or

or a pharmaceutically acceptable salt ~~or solvate~~ thereof.

Claim 28 (currently amended): A method of inhibiting one or more cyclin dependent kinases, comprising administering a therapeutically effective amount of at least one compound of claim 1 to a patient ~~in need of such inhibition~~.

Claim 29 (original): A method of treating one or more diseases associated with a ~~cyclin dependent~~ kinase, comprising administering a therapeutically effective amount of at least one compound of claim 1 to a patient ~~in need of such treatment~~.

Claim 30 (original): The method of claim 29, wherein said ~~cyclin dependent~~ kinase is CDK2.

Claim 31 (original): The method of claim 29, wherein said disease is selected from the group consisting of: cancer of the bladder, breast, colon, kidney, liver, lung, small cell lung cancer, esophagus, gall bladder, ovary, pancreas, stomach, cervix, thyroid, prostate, and skin, squamous cell carcinoma;

leukemia, acute lymphocytic leukemia, acute lymphoblastic leukemia, B-cell lymphoma, T- cell lymphoma, Hodgkins lymphoma, non-Hodgkins lymphoma, hairy cell lymphoma, Burkett's lymphoma; acute and chronic myelogenous leukemia, myelodysplastic syndrome, promyelocytic leukemia; fibrosarcoma, rhabdomyosarcoma; astrocytoma, neuroblastoma, glioma and schwannomas; melanoma, seminoma, teratocarcinoma, osteosarcoma, xenoderoma pigmentosum, keratoctanthoma, thyroid follicular cancer and Kaposi's sarcoma.

Claim 30 (currently amended): A method of treating one or more diseases associated with cyclin dependent kinase, comprising administering to a mammal in need of such treatment

an amount of a first compound, which is a compound of claim 1, or a pharmaceutically acceptable salt ~~or solvate~~ thereof;

and

an amount of at least one second compound, said second compound being an anti-cancer agent;

wherein the amounts of the first compound and said second compound result in a therapeutic effect.

Claim 33 (original): The method of claim 32, further comprising radiation therapy.

Claim 34 (original): The method of claim 32, wherein said anti-cancer agent is selected from the group consisting of a cytostatic agent, cisplatin, doxorubicin, taxotere, taxol, etoposide, irinotecan (or CPT-11), camptostar, topotecan, paclitaxel, docetaxel, epothilones, tamoxifen, 5-fluorouracil, methoxtrexate, 5-Fluorouracil, temozolomide, cyclophosphamide, 4-[2-[4-[(11R)-3,10-dibromo-8-chloro-6,11-dihydro-5H-benzo[5,6]cyclohepta[1,2-b]pyridin-11-yl-]-1-piperidinyl]-2-oxoehtyl]-1-piperidinecarboxamide, tipifarnib, L778,123 (a farnesyl protein transferase inhibitor), BMS 214662 (a farnesyl protein transferase inhibitor), Iressa, Tarceva, antibodies to EGFR, Gleevec, intron, ara-C, adriamycin, cytoxan, gemcitabine, Uracil mustard, Chlormethine, Ifosfamide, Melphalan, Chlorambucil, Pipobroman, Triethylenemelamine, Triethylenethiophosphoramine, Busulfan, Carmustine, Lomustine, Streptozocin, Dacarbazine, Floxuridine, Cytarabine, 6-Mercaptopurine, 6-Thioguanine, Fludarabine phosphate, oxaliplatin, leucovirin, oxaliplatin,

Pentostatine, Vinblastine, Vincristine, Vindesine, Bleomycin, Dactinomycin, Daunorubicin, Doxorubicin, Epirubicin, Idarubicin, Mithramycin, Deoxycoformycin, Mitomycin-C, L-Asparaginase, Teniposide 17α-Ethinylestradiol, Diethylstilbestrol, Testosterone, Prednisone, Fluoxymesterone, Dromostanolone propionate, Testolactone, Megestrolacetate, Methylprednisolone, Methyltestosterone, Prednisolone, Triamcinolone, Chlorotrianisene, Hydroxyprogesterone, Aminoglutethimide, Estramustine, Medroxyprogesteroneacetate, Leuprolide, Flutamide, Toremifene, goserelin, Cisplatin, Carboplatin, Hydroxyurea, Amsacrine, Procarbazine, Mitotane, Mitoxantrone, Levamisole, Navelbene, Anastrazole, Letrazole, Capecitabine, Reloxafine, Droloxafine, or Hexamethylmelamine.

Claim 35 (original): A pharmaceutical composition comprising a therapeutically effective amount of at least one compound of claim 1 in combination with at least one pharmaceutically acceptable carrier.

Claim 36 (original): The pharmaceutical composition of claim 35, additionally comprising one or more anti-cancer agents selected from the group consisting of cytostatic agent, cisplatin, doxorubicin, taxotere, taxol, etoposide, CPT-11, irinotecan, camptostar, topotecan, paclitaxel, docetaxel, epothilones, tamoxifen, 5-fluorouracil, methoxtrexate, 5-fluorouracil, temozolomide, cyclophosphamide, 4-[2-[4-[(11R)-3,10-dibromo-8-chloro-6,11-dihydro-5H-benzo[5,6]cyclohepta[1,2-b]pyridin-11-yl-]-1-piperidinyl]-2-oxoehtyl]-1-piperidinecarboxamide, Zarnestra® (tipifarnib), L778,123 (a farnesyl protein transferase inhibitor), BMS 214662 (a farnesyl protein transferase inhibitor), Iressa, Tarceva, antibodies to EGFR, Gleevec, intron, ara-C, adriamycin, cytoxan, gemcitabine, Uracil mustard, Chlormethine, Ifosfamide, Melphalan, Chlorambucil, Pipobroman, Triethylenemelamine, Triethylenethiophosphoramine, Busulfan, Carmustine, Lomustine, Streptozocin, Dacarbazine, Floxuridine, Cytarabine, 6-Mercaptopurine, 6-Thioguanine, Fludarabine phosphate, Pentostatine, Vinblastine, Vincristine, Vindesine, Bleomycin, Dactinomycin, Daunorubicin, Doxorubicin, Epirubicin, Idarubicin, Mithramycin, Deoxycoformycin, Mitomycin-C, L-Asparaginase, Teniposide 17α-Ethinylestradiol, Diethylstilbestrol, Testosterone, Prednisone, Fluoxymesterone, Dromostanolone propionate, Testolactone,

Megestrolacetate, Methylprednisolone, Methyltestosterone, Prednisolone, Triamcinolone, Chlorotrianisene, Hydroxyprogesterone, Aminoglutethimide, Estramustine, Medroxyprogesteroneacetate, Leuprolide, Flutamide, Toremifene, goserelin, Cisplatin, Carboplatin, Hydroxyurea, Amsacrine, Procarbazine, Mitotane, Mitoxantrone, Levamisole, Navelbene, Anastrazole, Letrazole, Capecitabine, Reloxafine, Droloxafine, or Hexamethylmelamine.

Claim 37 (original): A compound of claim 1, in isolated and purified form.

Claim 38 (new claim): A method of treating a cancer, comprising administering a therapeutically effective amount of at least one compound of claim 1.

Claim 39 (new claim): The method of claim 38, wherein said cancer is selected from the group consisting of:

cancer of the bladder, breast, colon, kidney, liver, lung, small cell lung cancer, esophagus, gall bladder, ovary, pancreas, stomach, cervix, thyroid, prostate, and skin, including squamous cell carcinoma;

leukemia, acute lymphocytic leukemia, acute lymphoblastic leukemia, B-cell lymphoma, T- cell lymphoma, Hodgkins lymphoma, non-Hodgkins lymphoma, hairy cell lymphoma and Burkett's lymphoma;

acute and chronic myelogenous leukemia, myelodysplastic syndrome and promyelocytic leukemia;

fibrosarcoma, rhabdomyosarcoma;

astrocytoma, neuroblastoma, glioma and schwannomas;

melanoma, seminoma, teratocarcinoma, osteosarcoma, xenoderoma pigmentosum, keratoctanthoma, thyroid follicular cancer and Kaposi's sarcoma.

Claim 40 (new claim): A method of treating a cancer, comprising administering to a mammal in need of such treatment

an amount of a first compound, which is a compound of claim 1, or a pharmaceutically acceptable salt thereof;

and

an amount of at least one second compound, said second compound being an anti-cancer agent;

wherein the amounts of the first compound and said second compound result in a therapeutic effect.

Claim 41 (new claim): The method of claim 40, further comprising radiation therapy.

Claim 42 (new claim): The method of claim 40, wherein said anti-cancer agent is selected from the group consisting of a cytostatic agent, cisplatin, doxorubicin, taxotere, taxol, etoposide, CPT-11, irinotecan, camptostar, topotecan, paclitaxel, docetaxel, epothilones, tamoxifen, 5-fluorouracil, methoxtrexate, 5FU, temozolomide, cyclophosphamide, SCH 66336, R115777, L778,123, BMS 214662, Iressa, Tarceva, antibodies to EGFR, Gleevec, intron, ara-C, adriamycin, cytoxan, gemcitabine, Uracil mustard, Chlormethine, Ifosfamide, Melphalan, Chlorambucil, Pipobroman, Triethylenemelamine, Triethylenethiophosphoramine, Busulfan, Carmustine, Lomustine, Streptozocin, Dacarbazine, Floxuridine, Cytarabine, 6-Mercaptopurine, 6-Thioguanine, Fludarabine phosphate, oxaliplatin, leucovirin, ELOXATIN™, Pentostatine, Vinblastine, Vincristine, Vindesine, Bleomycin, Dactinomycin, Daunorubicin, Doxorubicin, Epirubicin, Idarubicin, Mithramycin, Deoxycoformycin, Mitomycin-C, L-Asparaginase, Teniposide 17α-Ethinylestradiol, Diethylstilbestrol, Testosterone, Prednisone, Fluoxymesterone, Dromostanolone propionate, Testolactone, Megestrolacetate, Methylprednisolone, Methyltestosterone, Prednisolone, Triamcinolone, Chlorotrianisene, Hydroxyprogesterone, Aminoglutethimide, Estramustine, Medroxyprogesteroneacetate, Leuprolide, Flutamide, Toremifene, goserelin, Cisplatin, Carboplatin, Hydroxyurea, Amsacrine, Procarbazine, Mitotane, Mitoxantrone, Levamisole, Navelbene, CPT-11, Anastrazole, Letrazole, Capecitabine, Reloxafine, Droloxafine, or Hexamethylmelamine.